UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/659,779	09/11/2000	TOSHIHARU OGURO	PF-2667/NEC/US/mh	5144

			EXAMINER
466	7590	01/13/2004	HUYNH, KIM T

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ART UNIT	PAPER NUMBER
2112	

DATE MAILED: 01/13/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)
Office Action Summary	09/659,779	OGURO, TOSHIHARU
	Examiner	**Art Unit**	
	Kim T. Huynh	2112	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

   A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE ____ MONTH(S) FROM
   THE MAILING DATE OF THIS COMMUNICATION.
   - Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
     after SIX (6) MONTHS from the mailing date of this communication.
   - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
   - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
   - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
   - Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
     earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on *30 October 2003*.

2a) ☒ This action is **FINAL**.   2b) ☐ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
     closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *1-8* is/are pending in the application.

   4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☒ Claim(s) *6 and 7* is/are allowed.

6) ☒ Claim(s) *1-5 and 8* is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☒ The drawing(s) filed on *9/11/00* is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.

   Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

   Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
   a) ☒ All   b) ☐ Some *   c) ☐ None of:
      1. ☒ Certified copies of the priority documents have been received.
      2. ☐ Certified copies of the priority documents have been received in Application No. _____.
      3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage
         application from the International Bureau (PCT Rule 17.2(a)).
   * See the attached detailed Office action for a list of the certified copies not received.

13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application)
     since a specific reference was included in the first sentence of the specification or in an Application Data Sheet.
     37 CFR 1.78.
   a) ☐ The translation of the foreign language provisional application has been received.

14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific
     reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .

4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____ .

DETAILED ACTION

Claim Rejections - 35 USC § 103

1.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2.   Claims 1-5 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Brief et al. (U.S Patent 6,205,501) in view of Ejiri (US Patent 6,434,643)

As per claim 1, Brief discloses A universal serial bus function evaluator

connected between a computer and an universal serial bus function, said

universal serial bus function evaluator comprising:

- o a token storage memory for storing a token transmitted from said

   computer; (col.4, lines 36-42)

- o a packet type judging circuit for judging a type of a return data packet

   returned from said universal serial bus function; (col.16, lines 42-57)

- o a functional circuit connected to said token storage memory for

   fetching IN token from said token storage memory and holding the same,

   and said functional circuit also being connected to said packet type

   judging circuit for receiving an information about the type of said return

   data packet from said packet type judging circuit. (col.5, lines 45-64),

   (col.8, lines 21-25), (col.7, lines 22-55), (col.5, lines 9-11, 55-64),

Brief discloses all the limitations as above except if said return data

packet is of NAK type, the functional circuit automatically transmits

repeatedly until DATA type STALL type. However, Ejiri discloses the host

detects a NAK in the handshake packet, it is possible to retry sending the

same data packet thus increase the reliability of data transfers. (col.5,

lines 50-60)

It would have been obvious to one having ordinary skills in the art

at the time the invention was made to incorporate Ejiri's teaching into

Brief's method to retry sending return packets so as to increase the

reliability of data transfer. (col.5, lines 50-60)

As per claim 2, Brief discloses:

o   an oscillator for generating a clock signal ; (col.7, lines 22-35), (col.8,

    lines 1-6)

o   an IN token holding circuit connected to said oscillator for receiving

    said clock signal and also connected to said token storage memory for

    fetching IN token from said token storage memory and holding the

    same; (col.5, lines 45-64), (col.7, lines 22-67), (col.8, lines 1-25)

o   a timing controller connected to said oscillator for receiving said clock

    signal and also connected to said packet type judging circuit for

    receiving an information about the type of said return data packet, and

    said timing controller also connected to said IN token holding circuit for

    controlling said IN token holding circuit both in a holding timing for

holding said IN token and in a transmitting timing for transmitting said

IN token to said universal serial bus function. (col.7, lines 22-55),

(col.2, lines 6-11)

As per claim 3, Brief discloses an EOP detecting circuit connected to said

universal serial bus function for receiving said return packet to detect a packet

end of said return packet, and said EOP detecting circuit also connected to said

timing controller for sending an EPO detecting signal which represents the

packet end to said timing controller. (col.7, lines 22-35)

As per claim 4, Brief discloses return data packet is of DATA type, then said

functional circuit not only cancels the held IN token but also transmits ACK token.

(col.7, lines 28-55)

As per claim 5, Brief discloses:

- o an oscillator for generating a clock signal ; (col.7, lines 22-35), (col.8, lines

  1-6)

- o an IN token holding circuit connected to said oscillator for receiving said

  clock signal and also connected to said token storage memory for fetching

  IN token from said token storage memory and holding the same; (col.5,

  lines 45-69), (col.7, lines 22-67), (col.8, lines 1-25)

- o an ACK token transmission circuit connected to said oscillator for

  receiving said clock signal; (col.7, lines 22-35)

- o a timing controller connected to said oscillator for receiving said clock

  signal and also connected to said packet type judging circuit for receiving

an information about the type of said return data packet, and said timing

controller also connected to said IN token holding circuit for controlling

said IN token holding circuit both in a holding timing for holding said IN

token and in a transmitting timing for transmitting said IN token to said

universal serial bus function, so that if said return data packet is of DATA

type, then said timing controller allows said ACK token transmission circuit

to transmit an ACK token to said universal serial bus function. (col.7, lines

22-55), (col.2, lines 6-11)

As per claim 8, Brief discloses:

- judging a type of a return data packet returned from said universal serial
  bus function ; (col.4, lines 36-42)

- fetching IN token from said storing means and holding the same; (col.5,
  lines 45-64)

- receiving an information about the type of said return data packet from
  said packet type judging circuit(col.8, lines 21-25), (col.7, lines 22-55),
  (col.5, lines 45-64) (col.5, lines 9-11, 55-64),

     Brief discloses all the limitations as above except if said return data

  packet is of NAK type, the functional circuit automatically transmits

  repeatedly until DATA type STALL type. However, Ejiri discloses the host

  detects a NAK in the handshake packet, it is possible to retry sending the

  same data packet thus increase the reliability of data transfers. (col.5,

  lines 50-60)

It would have been obvious to one having ordinary skills in the art at the time the invention was made to incorporate Ejiri's teaching into Brief's method to retry sending return packets so as to increase the reliability of data transfer. (col.5, lines 50-60)

Allowable Subject Matter

3.   Claims 6-7 are allowed.

The following is an examiner's statement of reasons for allowance:

Applicant's claimed invention is deemed allowable over the prior art of record as the prior art fails to teach or suggest the timing controller that, upon receipt of a NAK packet, allows the IN token holding circuit to transmit the IN token held therein to the universal serial bus function repeatedly until the return data packet is either a DATA or STALL type, at which time the timing controller instructs the IN token holding circuit to hold the IN token therein in combination with other limitations recited in independent claim 6 and further in view of the specification and applicant's arguments.

Response to Arguments

4.   Applicant's reconsideration filed on 10/30/03 have been fully considered but are not persuasive.

In response to applicant's argument that there is no suggestion in the proposed combination to resend an IN token that is held in the hub 13 in EJIRI or hub 110 in BRIEF et al., or to cancel the IN token held therein when the return data packet is a DATA or STALL. However, as Ejiri notes at col.5, lines 14-60, host 12 detects a NAK

handshake packet 53, it is possible to retry sending these packets with the same data

packet 52 thus increase the reliability of data transfers. Furthermore, handshake packet

53 contain packet ID 61 enabling one of the three states to be returned: ACK, data was

received, NAK, data not receive, STALL not possible because of error. By default

packets will be cancelled the IN token held when packet is DATA or STALL. (wherein

DATA implies ack data receive, STALL implies errors not possible since both data either

already received or error by default will not held any longer). It is clear that Ejiri is an

analog art and it reads on the breadth of the claimed languages; therefore it is properly

stated in the rejection of record.

Conclusion

5.   THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time

policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later

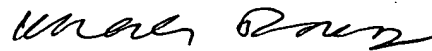than SIX MONTHS from the mailing date of this final action.

Conclusion

6.   *Any inquiry concerning this communication or earlier communications from the examiner should*

be directed to Kim Huynh whose telephone number is (703)305-5384 or via e-mail addressed to

[kim.huynh3@uspto.gov]. The examiner can normally be reached on M-F 8:30AM- 6:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark

Rinehart can be reached on (703) 305-4815 or via e-mail addressed to [mark.rinehart@uspto.gov]. The

fax phone numbers for the organization where this application or proceeding is assigned are (703)872-

9306 for regular communications and After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be

directed to the receptionist whose telephone number is (703)306-5631.

Kim Huynh

Jan. 8, 2004

Khanh Dang
Primary Examiner